OIPE IAP64
OCT 25 2005
PATENT & TRADEMARK OFFICE

Fig. 1

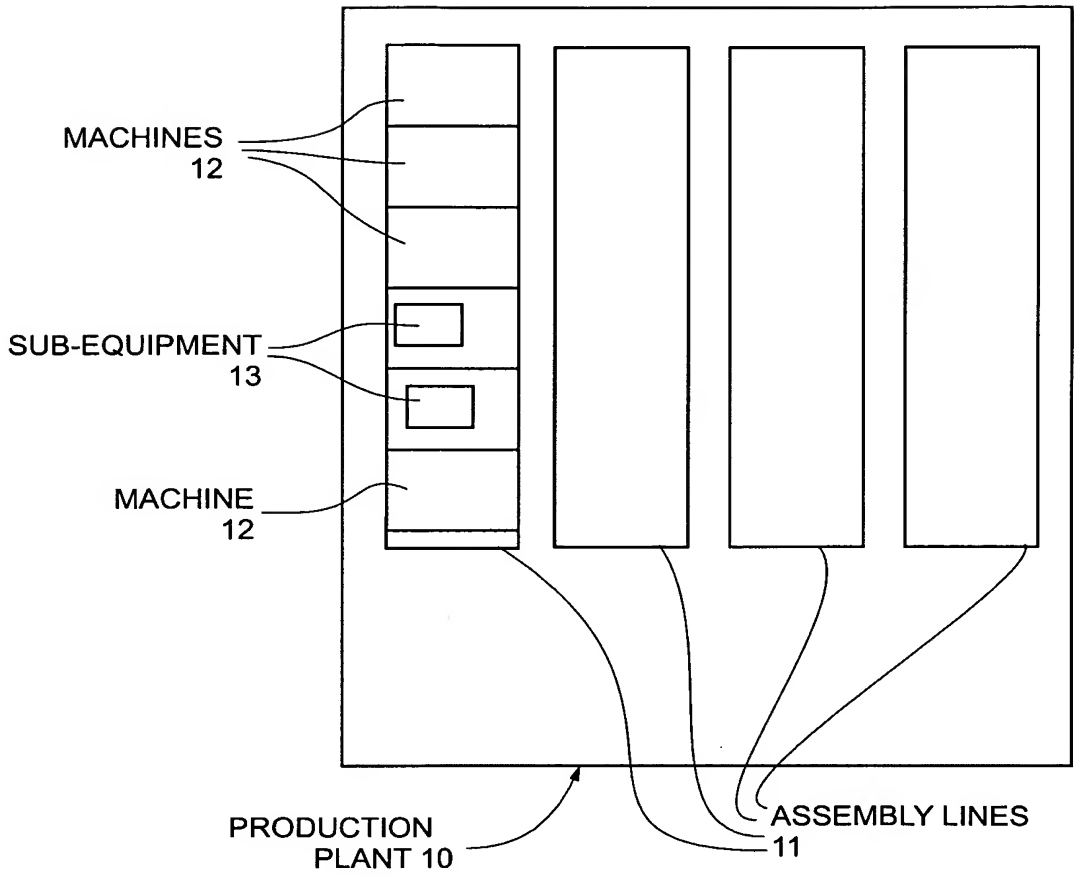


Fig. 2

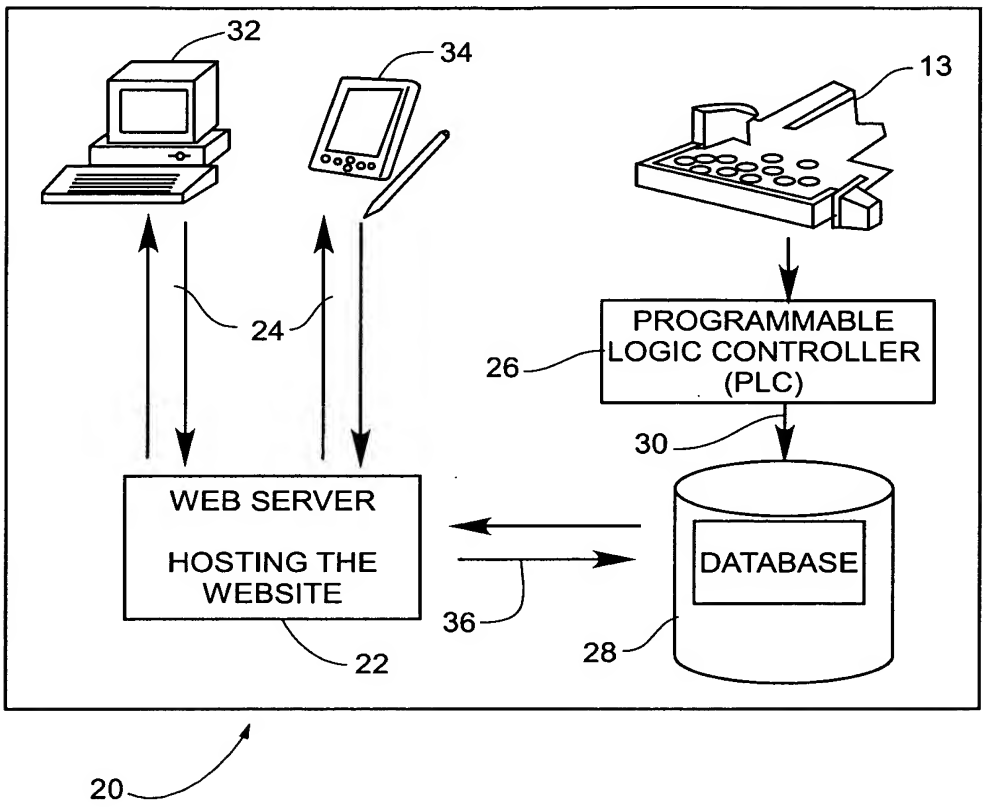

32
34
13
24
PROGRAMMABLE
LOGIC CONTROLLER
(PLC)
26
30
WEB SERVER
HOSTING THE
WEBSITE
DATABASE
36
28
22
20

Fig. 3B

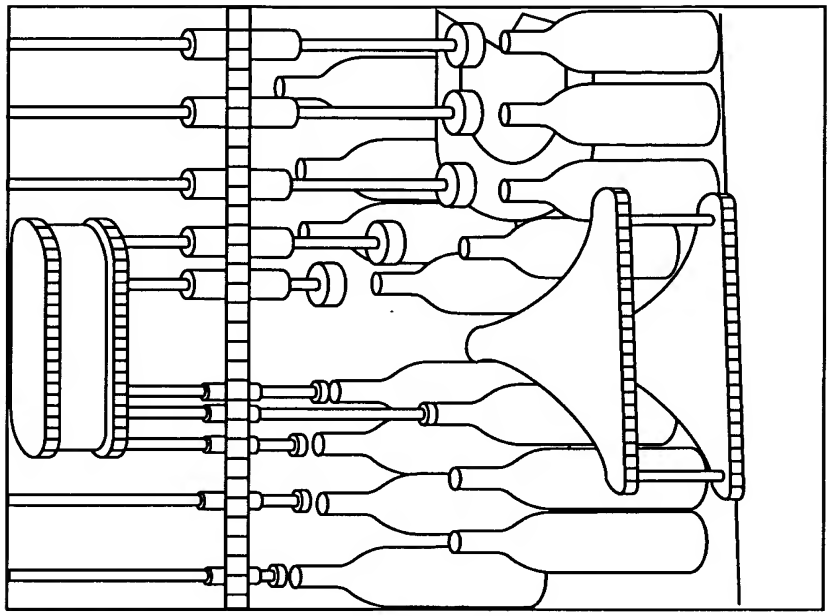


Fig. 3A

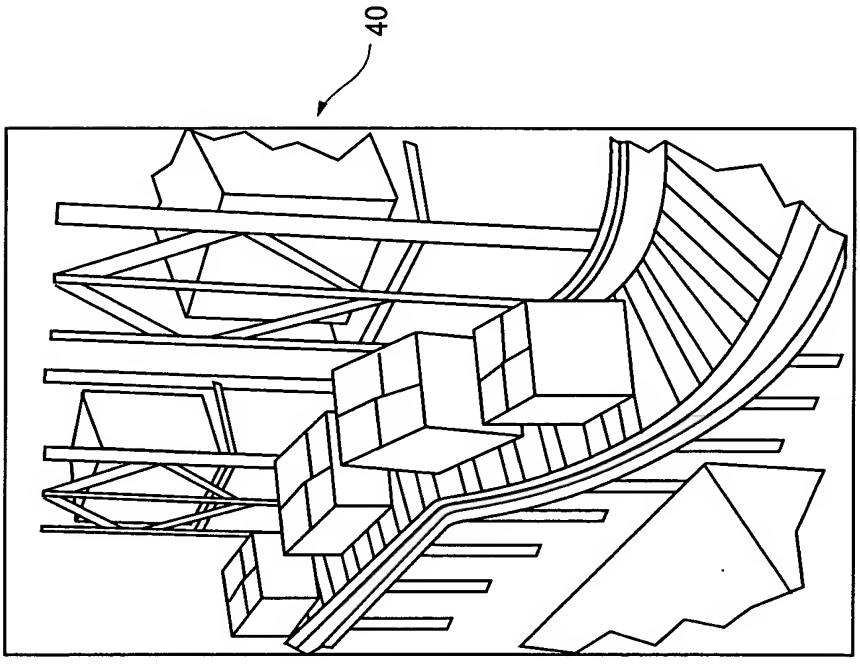


Fig. 4

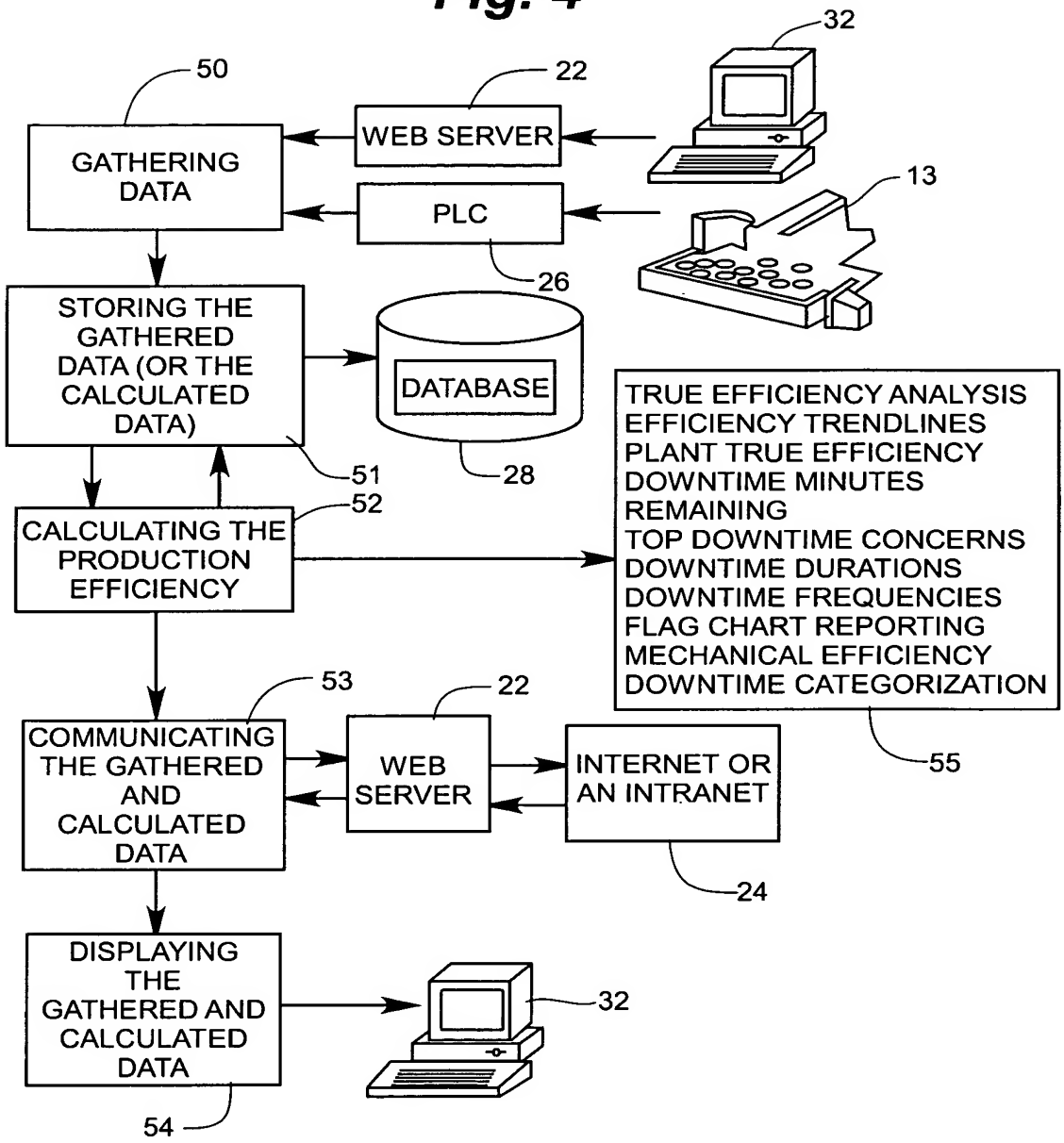

50
22
32
GATHERING DATA
WEB SERVER
PLC
13
26
STORING THE GATHERED DATA (OR THE CALCULATED DATA)
DATABASE
51
28
52
CALCULATING THE PRODUCTION EFFICIENCY
TRUE EFFICIENCY ANALYSIS
EFFICIENCY TRENDLINES
PLANT TRUE EFFICIENCY
DOWNTIME MINUTES REMAINING
TOP DOWNTIME CONCERNS
DOWNTIME DURATIONS
DOWNTIME FREQUENCIES
FLAG CHART REPORTING
MECHANICAL EFFICIENCY
DOWNTIME CATEGORIZATION
55
53
22
COMMUNICATING THE GATHERED AND CALCULATED DATA
WEB SERVER
INTERNET OR AN INTRANET
24
DISPLAYING THE GATHERED AND CALCULATED DATA
32
54

Fig. 5

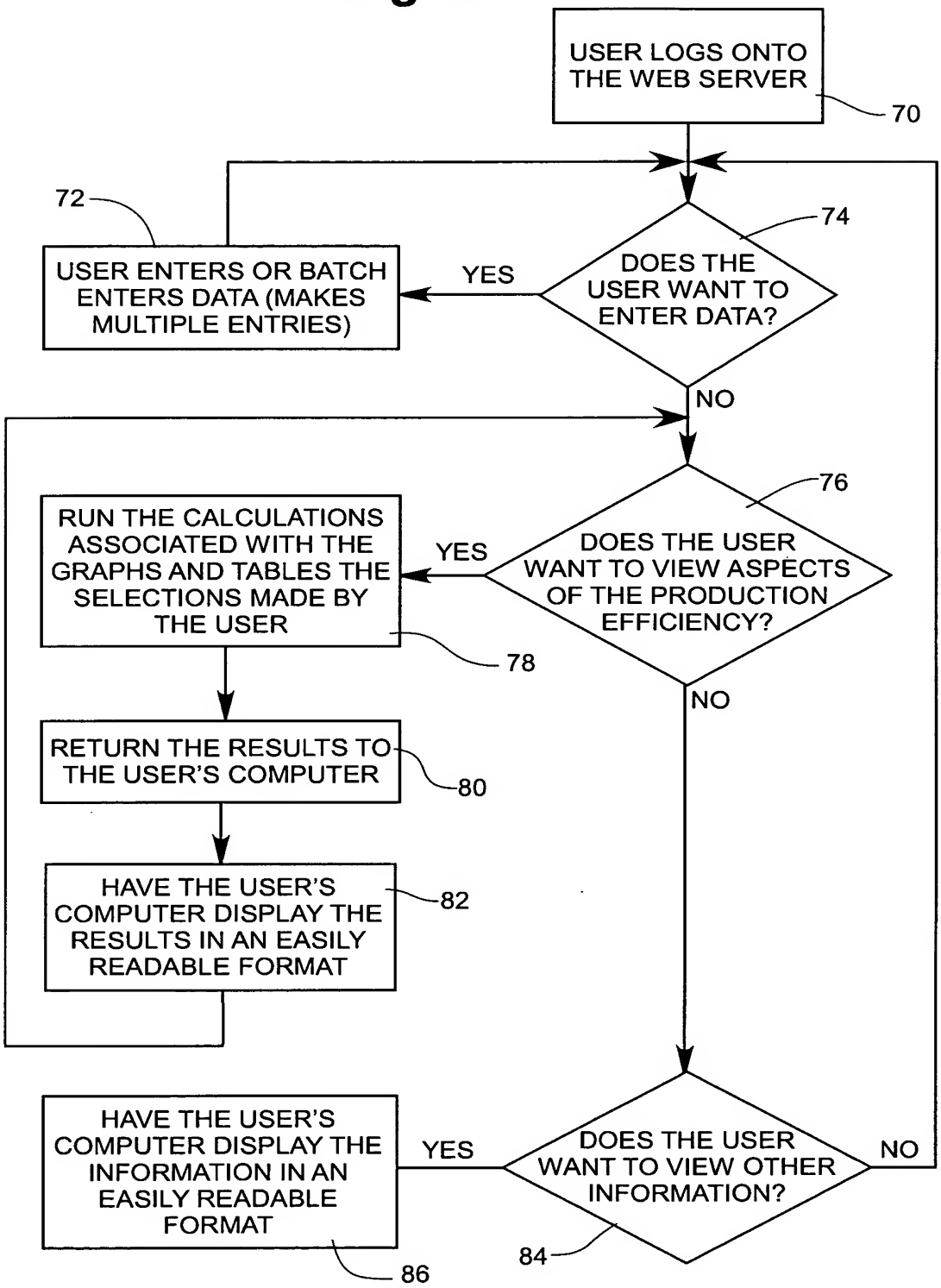

USER LOGS ONTO THE WEB SERVER
70
72
74
USER ENTERS OR BATCH ENTERS DATA (MAKES MULTIPLE ENTRIES)
YES
DOES THE USER WANT TO ENTER DATA?
NO
76
RUN THE CALCULATIONS ASSOCIATED WITH THE GRAPHS AND TABLES THE SELECTIONS MADE BY THE USER
YES
DOES THE USER WANT TO VIEW ASPECTS OF THE PRODUCTION EFFICIENCY?
78
NO
RETURN THE RESULTS TO THE USER'S COMPUTER
80
HAVE THE USER'S COMPUTER DISPLAY THE RESULTS IN AN EASILY READABLE FORMAT
82
HAVE THE USER'S COMPUTER DISPLAY THE INFORMATION IN AN EASILY READABLE FORMAT
YES
DOES THE USER WANT TO VIEW OTHER INFORMATION?
NO
84
86

Fig. 6

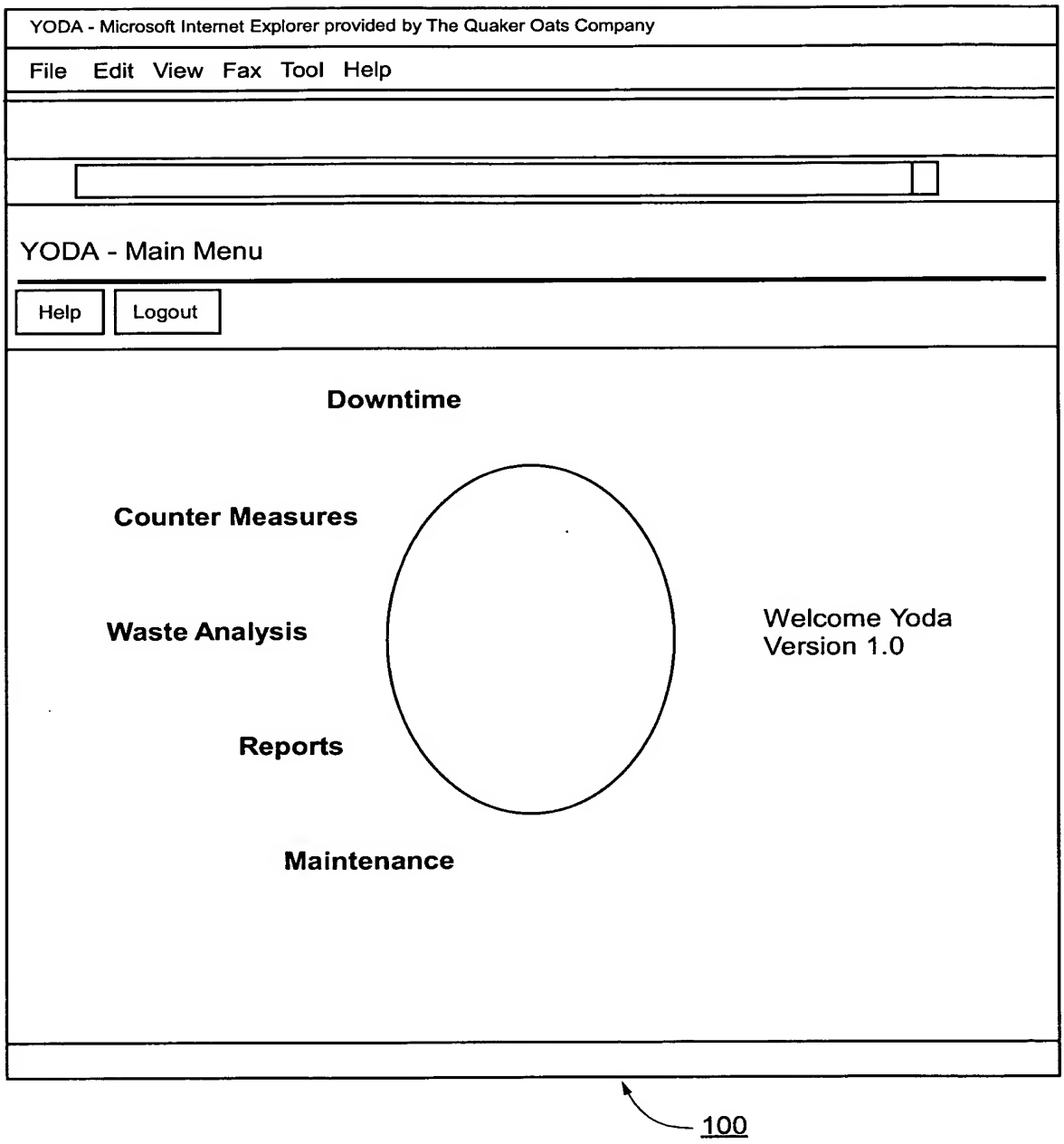
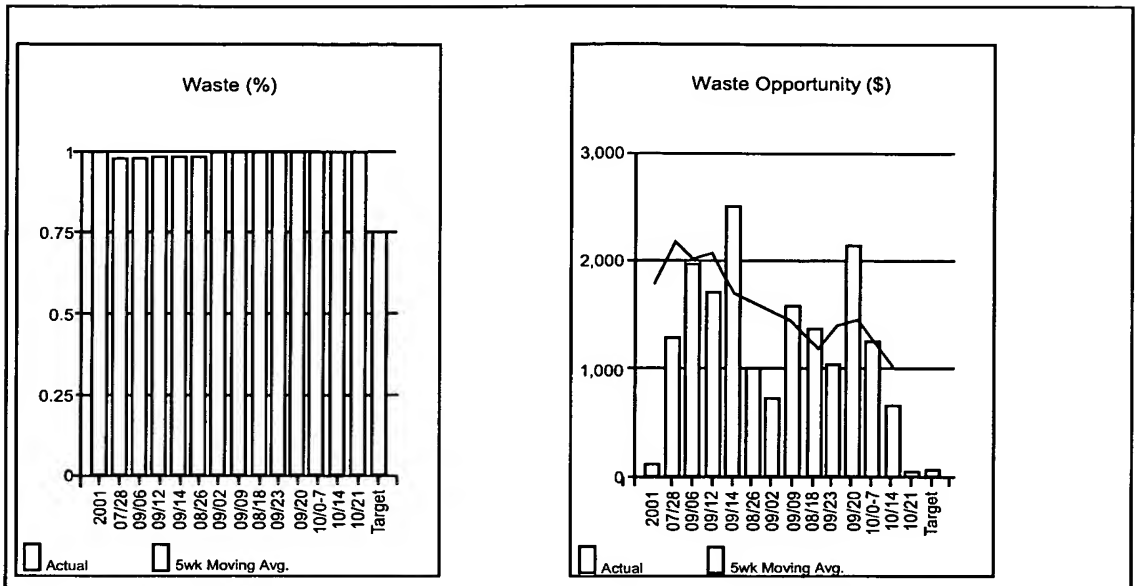

YODA - Microsoft Internet Explorer provided by The Quaker Oats Company
File Edit View Fax Tool Help
YODA - Main Menu
Help
Logout
Downtime
Counter Measures
Waste Analysis
Reports
Maintenance
Welcome Yoda
Version 1.0
100

Fig. 7



YODA - Waste Analysis/Waste Reporting

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Weekly Waste Performance

Line: 408 Week Begin Date: 10/21/2002

Week Begin Date	07/29	08/05	08/12	08/19	08/26	09/02	09/09	09/16	09/23	09/30	10/07	10/14	10/21	Target
Output (Cases)	63429	71026	71662	70206	63743	58328	58771	66202	77345	45264	74632	81119	35513	
Waste (Cases)	386.79	564.87	385.45	755.93	341.18	261.62	448.58	318.84	385.38	426.12	292.46	223.47	8.98	
Waste %	0.99%	0.99%	0.99%	0.99%	0.99%	1.00%	0.99%	1.00%	1.00%	0.99%	1.00%	1.00%	1.00%	0.75%
Waste 5 wk avg. %	0.79%	0.99%	0.99%	0.99%	0.99%	0.99%	0.99%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	
Waste Cost	$1302.40	$1969.44	$1718.46	$2504.48	$1007.42	$737.95	$1593.57	$1375.95	$1026.33	$2139.11	$1280.77	$682.74	$24.96	$50.00
Waste Cost 5 wk avg.	$1784.07	$2177.98	$2042.86	$2082.76	$1700.46	$1507.57	$1512.38	$1443.74	$1148.11	$1374.45	$1483.02	$1298.85	$1026.78	

110

Fig. 8

YODA - Microsoft Internet Explorer provided by The Quaker Oats Company

File Edit View Fax Tool Help

YODA - Reports/Steering Pack

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Performance Summary Report by Shift

Line 400 - #5 Jones Week Begin 07-21-2003

	21			22			23			24			25			26			27			WB: 07-21-2003			
	Monday			Tuesday			Wednesday			Thursday			Friday			Saturday			Sunday			Total Per Shift			
	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	Total
Actual Output (Cases)	2342	3238	2871	2037	2851	2833	2384		833	2037	2851	2833	2037	2851	2833	2037	2851	2833	2037	2851	2833	2037	2851	2833	29244
Line Hours (Hours)	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	168
Capable Rate (for each product code)	4167	4167	4167	4167	4167	4167	4167		4167	4167	4167	4167	4167	4167											
Downtime (mins)	138	13	83	98	55	82	634	480	358	299	237	298	295	158								958	943	788	2805
% Process Efficiency	70%	97%	86%	79%	86%	70%	71%	0%	72%	37%	45%	33%	37%	44%	0%	0%	0%	0%	0%	0%	0%	42%	39%	38%	37%
Lost time due to Downtime	30%	3%	14%	21%	14%	31%	29%	100%	88%	63%	55%	67%	63%	56%	100%	100%	100%	100%	100%	100%	100%	58%	61%	78%	63%

Bold = Default capable rate used, product code not found.

Red = No outputs found at the beginning of the shift. They may be incorrect.

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Downtime Detail Report by Shift

Line 400 - #5 Jones Week Begin 07-21-2003

		21			22			23			24			25			26			27			WB: 07-21-2003			
		Monday			Tuesday			Wednesday			Thursday			Friday			Saturday			Sunday			Total Per Shift			
Description		3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	Total
1. E. SCHEDULE S. SCHEDULE R. PM	Mins Stops							480 1		80 2													480 1		80 2	560 3
2. E. POUCHER S. POUCHER R. WEB AROUND	Mins Stops	3 1		11 2	13 3		3 1	9 3		14 2	9 3	38 5	81 11	74 4									108 145	38 16	100	255 35
3. E. POUCHER S. POUCHER	Mins Stops									98 3	84 2		24 3										84 2		122 6	206 8

120

Fig. 9

YODA - Microsoft Internet Explorer provided by The Quaker Oats Company

File Edit View Fax Tool Help

YODA - Reports/Downtime Detail

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Export to Excel

Downtime Summary

Line: 400

Equipment: CARTONER

Sub Equipment: CARTONER

Reason Code: L-Shaped Carton Detector

Date Range: 06/15/2003 - 07/12/2003

2061	400	CARTONER	CARTONER	L-SHAPED CARTON DETECTOR	6	18

Total 6 18

130